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Living 100 Happy Years

by

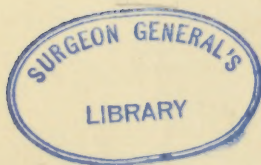
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Foreword

Most persons think they would like to be a hundred years old. That is the way they feel about it when dangerously sick at any rate. There is a difference between feeling that way after a negative fashion and the kind of a desire for a long life which translates itself into adopting rules of living and then living them. The largest factor in longevity is inheritance. But right living is also of major importance, and the average person can add a decade or two or three to his otherwise expectancy by living so as to earn the increase. The time comes to all of us when that ten, twenty or thirty years looks good.

W. A. EVANS M. D.

Health Editor "Chicago Daily Tribune"

Preface

If only fathers, mothers, and earnest young people of both sexes could be induced to read this little book and lay its sensible, clearly expressed precepts to heart, what a power for human health and happiness might be developed as a result! What young person would not be charming? What person of middle age but would prize the grace that attracts after the fresh beauty of youth is past,—the grace that is the result of good health, useful activity and the cheerfulness of spirit that, as Solomon says, “doeth good like medicine.” Robert Louis Stevenson says that to find a happy person is “better than finding a tenpound note; the entrance of such a person into a room is as tho another candle was lighted.” Yet the essential element of the grace of cheerfulness is good health. And as to old age—how has it been looked forward to with fear and trembling, when its almost universal accompaniment has been pain, feebleness, and failure of both bodily and mental powers because of ill health. Science and experience have taught us, beyond question, that old age may be freed from all these enemies if only *health* is preserved. The old age of

a healthy body may be full of comfort if right living has been the rule of the preceding years.

With the earnestness that comes from the experiences of over half a century in observing, teaching, and endeavoring to train the bodies, minds, and hearts of the young, I advise the careful reading of this little book, written by a distinguished physician whose broad humanitarian sympathies have endeared her to patients and friends alike. I wish her little book might be added to the list of supplementary reading in public high schools, and its reading made compulsory.

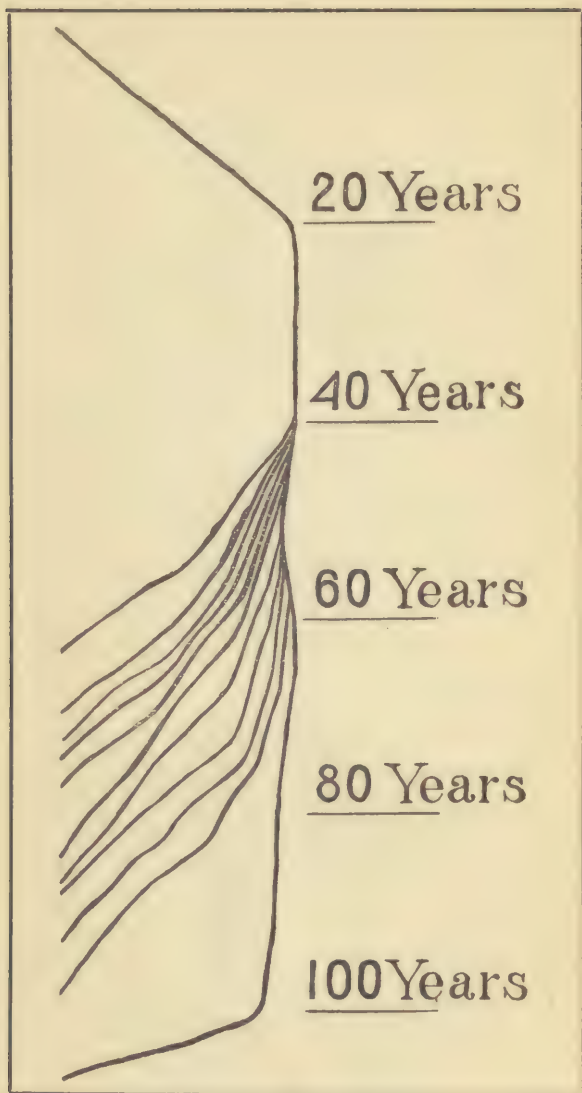
HELEN EKin STARRETT,
Principal Emeritus of the Starrett School.

Why Not Live One Hundred Years?

The business of living may be described as a happy adventure beset with mishaps. It can be accomplished only through the medium of a marvelously constructed body, which is really a vitalized piece of mechanism.

The journey of life may be represented by the accompanying chart which depicts a highway along which Life must travel.

The first twenty years is shown as a sharp ascent. The following twenty years is a broad, beautiful table land from which one has an unclouded vision of the whole aspect of life. The next twenty years is represented by a depression which has numerous paths leading away from the main road, but if one sticks to the trail he arrives again at the same level which is upheld for another twenty years and pursues a slightly downward course from that time on.



Every infant faces at birth a steep hill. He struggles for a foot-hold in the crumbling soil. Unless he has intelligent parents supporting and drawing him with cords from above he is apt to slip back and be lost. A child may be struck down by an infection and as he falls he strikes others about him and the whole number go down like ten-pins. If the struggle has been too hard tuberculosis may claim a victim just as he is about to reach the brow of the hill.

The youth who has survived all the difficulties of childhood and attained the height of the table-land now has a reasonable expectation of reaching the next mile stone. In the first half of the stretch the road is broad, beautiful and smooth and gives a strong rebound if one falls. But in the last half the path becomes narrower and is bordered by tempting flowers.

From the fortieth to the sixtieth year the trail is full of seductive by-paths which lead invitingly away and always downward. Overwork, with too little rest, is one of the alluring by-paths into which a man of forty is often beguiled. He sees the flowers of wealth blooming abundantly down its side but does not know that picturesque joy is found only in its proximal portion, and later the path becomes uncertain and slippery.

If he goes too far it is impossible to return to the plateau.

A man's confidence in himself at forty leads him into many erroneous paths, but if he pursues the level until he reaches the sixtieth milestone his chances are good for contributing to and partaking of the pleasures of life until he reaches the goal of one hundred years and drops suddenly over the declivity.

A man with a rope about his waist may travel for twenty or forty years from the highway before being finally lost, but he has long ago passed all the beauteous joys and his ultimate years are given over to efforts to escape the base line of eternity; while his friends who hold the rope are in danger of being drawn into the same dangerous by-path.

Drop in at the office of the next insurance company you happen to pass, tell your age and inquire the date of your probable dissolution. By reference to a chart prepared by a statistician who is neither your friend nor foe, but coldly scientific, the party inquired of will probably give you a shock of dismay in his reply. You are not considered individually but as part of the general average. You want to disprove such disconcerting information as he has given you so you pay a call on your physician and ask him where you stand on this highway of

life. He turns his telescope on you and locates your position. Perhaps if you have been resolute in your demeanor your feet have remained steadfastly on the path of health but if you are past forty the chances are that you will need a life belt about your waist.

Life insurance companies have come to realize the value of health education and they are recommending frequent expert examination and advice

If we use our brains in the care of our bodies they will last longer. One can live one hundred years if he wants to do so and carries out the rules.

The possibility of a thing is often less remote than we suppose. Strong desire and unhindered effort when yoked together can overcome obstacles which looked unsurmountable.

Science is a bold creature. She is now snapping her fingers at Father Time and showing him how she has applied her principles to extend our scriptural allotment of three score years and ten.

Since the introduction of Science many natural laws have been upset. Even the common old law of gravity has been violated by scientific experts. A machine heavier than air is made to soar upward and rivers are turned about in their courses. That great plant scientist of the West has been able to make some val-

uable suggestions to Nature and has collaborated with her in vegetative improvement.

Before the age of scientific discovery man was sent forth to earn his living "by the sweat of his brow." Now many a man lives in luxury whose brow has never been moistened by perspiration, due to toil. Brains do the work and the head is kept cool.

Man is no longer a mere burden bearer valued by his muscular power alone; machines have been invented to relieve muscles and in the catalogue of scientific achievement the noble human machine assumes its dignified place.

Adult Welfare

In the last half century there has been produced a wonderful change in the mortality rate of infants.

Formerly, one tenth of all babies born into the world perished in the first year of life.

It was an awful waste of human flesh for every tenth infant to be deprived of its right to live. A possible president of the United States might succumb to summer complaint any day in the week and future statesmen were liable to pass from an unfriendly world after a brief and losing struggle of a few months. Economics demanded that something be done about it.

Recognizing the fact that care is the great fundamental in an infant's life, we set about teaching parents how to properly nurse and care for their young so that sickness shall be avoided.

The clock, the graduate and percentage table have displaced the cradle and pacifier.

A child will not whine to be rocked nor scream for a food pretence if it is trained into regular habits of definite sleeping and feeding.

When we started a campaign for saving the babies we did not search through the pharmacopeiae for new remedies with which to combat disease. The drug factor received the least consideration. Common sense was called in consultation.

Scientific care instead of ignorant haphazard, has so improved the welfare of infants that this mortality rate has been reduced by fifty percent. We have studied, learned and applied certain principles to the rearing of the young and achieved splendid results. But alas! The grown-ups! The young adult is pushed out into the world of business where he must compete for success at any physical cost. His education has dealt mainly with far loftier and less intimate subjects than the physiological requirements of his own body. Yet, of all the perplexities which confront a man today there is none so interesting as the problem of remaining alive; usefully and happily alive!

The child grown into a responsible being is even more subject to laws of Nature than the infant, for she is more tyrannical, less forgiving toward the adult.

A study of the requirements of the body and the best means of administration is winning the day for the babies; but the adult regards his own welfare much as the small boy did his bath, who

said he would be so glad when he grew old enough to bathe himself, for then he "wouldn't bathe."

In taking over the operation of one's own machine he should make a friend of Science and conduct his management according to the principles which are laid down.

If the saving of these small potential citizens is worth all the attention it is receiving today, why should we not give as much heed to extending the years and strength of those who are developed, trained, experienced, and have proven themselves of economic value to the world?

The Charm of Youth and Grace of Age

The human family may be hopelessly divided in matters of politics, religion and morals, yet find a common denominator in that strong desire which Nature has implanted in every individual to live long, look well, and be well and happy. Not only is it desirable to continue our physical existence, but, in doing so, to be able to postpone the sunset or fading period of life. The appearance of age is like poverty. The sting of poverty is not in being poor, but in having your friends *know* that you are poor.

A handsome woman with a goitre on her neck appealed for relief to a physician who found a wrong condition in a remote part of her body. "Oh never mind that" said she, "it doesn't show." The stigma of age lies in a stooped figure with uncertain step. Not all the artifices of Beauty and her trained assistants can disguise these signs of age for Youth cannot be purchased in glass stoppered bottles or cold cream jars.

Man has even been seeking to discover the fountain of perpetual youth. The vegetable, mineral and animal kingdoms

have been explored in the vain hope of finding a drug which would prove to be "an elixir of life."

Having pursued this *ignis fatuus* long and wandered far, he has at last learned that this wonderful and elusive elixir can be produced without the aid of crucible or medicinal art. Within man's own living body is found the greatest of all chemical workshops—and only in the natural chemism of his body is elaborated that which has been sought afar.

The science of chemistry has drawn aside the curtain and given us a peep into the mysterious workshop of life. There are known in the world of chemistry eighty-three elementary substances. Out of the eighty-three known chemical elements only twelve enter uniformly into the composition of the human body.

A Greek philosopher once gave man a hint as to where the secret of Youth might be found in these words, "Know thyself." Knowledge is the greatest of all equipment, but knowledge that does not lead to action is inconsequential. It is through knowledge of the structure and functioning of the body and the application of natural laws that man can extend his years and prolong his youth. The dreaded decadence which is the frequent accompaniment of age can be avoided by learning how to live right.

No humanly designed machine can in any way approach in delicacy or complexity the vital mechanism of the body.

Its engine is made up of heart, lungs, kidneys, liver and digestive apparatus. The brain is the engineer. An anatomically correct engine may have a poor engineer and be so badly operated that its structure becomes damaged.

The brain and nerves constitute an autocracy which is more compelling than that of an Emperor. They are the despotic rulers of the body. All the other organs and members are slaves who carry out unquestioned orders. Every movement of the hand and each uttered word is a mandate of the brain fulfilled by its obedient servants.

The blood is the fuel, or life giving force of the body. The engine may be in perfect running order, nervous system intact, and yet by a sudden injury a large amount of blood may be lost which will prove quickly fatal.

Your automobile engine may be in perfect order, but if you make a puncture into your gasoline tank allowing the fluid to escape, the machine will soon cease to work.

If we try to run a machine about which we are ignorant we wreck it, but this precious human machine is run in the most hap-hazard ignorant manner. The

idea seems to be to make it produce the maximum result in the minimum time. Like an ignorant farmer who exhausts his soil to produce maximum crops. An incompetent operator of the human machine must pay a big bill for damages and he never escapes the creditors. A court higher than any human court holds him to account. He may postpone payment but the rate of interest is high.

Nature is a competent legislator. She has established certain physical laws and fixed the penalty for breaking them. She is exacting in her collection and ignorance of the law excuses no one, yet she seldom acts with sudden violence. She is like an indulgent parent, forbearing, trying to make adjustment, warning, but reluctant to punish. Only after repeated offenses is the law allowed to take its course.

The body being a vitalized machine, differs from one which is constructed of inert material in that it has power to rebuild. So long as the destructive and constructive processes continue in perfect balance, the machine remains in order. Nature has designed the great human machine to run one hundred years, but few are able to accomplish it. Why? We are the architects and builders of our own bodies but the foundation of the structure is inherited from our ancestors. If one is fundamentally handicapped by

a system of bad tubing such as blood vessels or an inadequate nervous system, he must learn how to transfer the stress, and relieve the tension on a weaker part. Intelligent mechanics can overcome the handicap and pass on to the succeeding generation an improved structure.

Nature may have given a man club feet but an intelligent mother co-operating with a good orthopedic surgeon is able to thwart the misadventure. Likewise if one has happily inherited faultless building material and skilfully applied those hygienic principles pertaining to corporal development he is able to impart to his progeny a strong foundation and a higher equation of resistance.

Happy, useful, long life is not an accident that strikes like lightning here and there. It is accomplished by purpose and intention. Just as fear invites danger, a strong desire creates hope, and hope, fulfilment. But desire without effort is as inert as faith without works. If we hope to keep well and strong we must learn the rules and be guided by them.

The more perfect the ancestral design inherited from your progenitors the more responsible are you to your offspring. If your parents, grandparents, and their parents, sensible of their responsibilities to you, have applied intelligent care to the upkeep of their mechanism you be-

come, by their wise efforts, the beneficiary of a legacy which should be esteemed above everything else in the world. If you are indifferent to your valuable inheritance and waste it in riotous living, not only yourself but your progeny suffers. Wasted youth is never regained. Begin in youth to build a strong structure but take lessons in building so that you may make no ignorant blunders.

Good Housekeeping

The poet who wrote "I would not live alway" and complained of the storms which beat and the "lurid mornings which dawn on us here," was probably impoverished in blood corpuscles or a victim of toxemia.

The spectrum of life is influenced by the color of the blood stream and every dawn is bright to him whose stream of life flows full and strong and red, and every day is drab to him who wears a drainage tube in his lung. Everybody loves to live yet nobody wants to live to decrepit old age and sit neglected by the fire with only a pipe or knitting for companion. Keeping our bones from the sexton is no laudable achievement.

Only the capacity for joy and unselfish happiness counts as life. This is developed through the intimate union of the spiritual and material forces of life. The spirit which can digest disappointment and assimilate sorrow is found in a healthy body. Health is potential happiness.

The body should be made a suitable, healthy habitation for the soul, for we are all made in the image of God, and are

not "groveling worms" which cumber the earth. The body is more than a machine for it is a beautiful, fully equipped home and is given to us to maintain. But not every person is a good housekeeper. Sometimes an efficiency expert has to be called upon to untangle and correct errors; or better still, he is employed before things are allowed to go wrong; he indicates changes here and there which improve the appearance as well as the stability of the structure. He teaches how to stoke the furnace, dispose of waste; how to run the whole machinery to the best advantage.

This efficiency expert whom you take into your confidence, and whose advice you should revere, is your own family physician. You have hitherto called him to patch your roof or underpin a settling foundation. To repair has been his work, but to *prevent* has become the watchword of this age.

More and more has the business of the wise physician become pedagogical. He himself has learned many things, he knows that a long suffering public is becoming enlightened and that education is good for it. It is through the teachings of the physician that the layman has learned what he already knows of the care of his body and the prevention of disease.

His interest has been awakened and he wants to know more of how to keep well and in good condition. This does not mean that he is to be given medicine. We do not save the babies by giving more medicine, but less. There are general laws which are applicable to every one, but each individual has a distinct entity and his regime of life should be outlined according to his own individuality. This should be the work of the expert. Every person beyond the age of thirty years should select a physician whom he trusts and visit him at least twice every year, for a thorough physical examination. It is only by adopting such a method that the common physical catastrophies can be averted. Every ailment is curable in its incipency but symptoms do not always present in the beginning.

Men drop dead of heart disease which they never knew they had. Life insurance is refused because of an obscured Bright's disease or high blood pressure; and women present themselves too late with malignant diseases of which they were unaware. These dire results are avoidable only by having the body machine examined frequently and following faithfully the rules laid down for its operation. Your friendly neighbor may be kindly intentioned when he advises you to take a certain kind of pill because

he is using it and thinks it has benefited him. Perhaps his chemistry needed more iron and he was supplying it, whereas your need was phosphatic and if you adopted his program you might find yourself in the unfortunate predicament of the man whose epitaph is seen in Cheltenham;

“Here I lie with my two daughters,
We died of drinking Cheltenham waters.
If we had stuck to Epsom Salts
We wouldn't be lying in these here
vaults.”

If, with each repudiation of Nature's laws, one were brought to his senses by a scream of pain he might become more circumspect. Pain which appears to be a cruelty, is often the essence of kindness, because it recalls one from an imminent danger. But the red flag of pain is not always thrown out to avert an accident, and even when present its warning is not always heeded.

When a certain rich man found himself in an eternally unhappy plight he had an instinct to warn those of his own family from falling into a like situation. He besought Abraham to send an angel from Heaven to convince his brethren of their peril. His appeal was denied. Full well did Abraham know that angels and arch-

angels would receive no friendly hearing when the danger seemed remote.

Strong, beautiful, charming Youth may hoodwink Nature into excusing violations of her laws for a certain time, but she exacts her penalty in the end, and Youth is compelled to pay in strength, beauty and charm for all hygienic misdemeanors.

Engine Fires

The fuel requirements of the body engine are *Air, Water and Food*. These are the essentials of life and no substitutes have ever been found. AIR which supplies Oxygen to the blood, is the supreme need of man.

The red cells of the blood carry the Oxygen which contributes to nutrition by its power of converting the food into living tissue. The combustion of food into heat and energy is likewise accomplished through the influence of Oxygen which is obtained from the air by breathing. Because most of the functions are automatic we disregard them. We are going to breathe whether we think about it or not, but not more than one person in one hundred knows how to breathe properly, and give sufficient oxygenation to the blood. Fresh pure air is the greatest foe of all germ diseases. That person who knows how to use his lungs in the process of breathing need have no fear of falling a victim to the scourge of tuberculosis or pneumonia.

A man spending the night in a country home found it impossible to open the window of his bed chamber. He called his

host and asked his assistance. "That window won't open," said he, "it has never been opened. Anyhow, it's too cold to have a window open tonight." The farmer was consistent in his principle; he had closed tightly all openings of his chicken house and finding eighteen dead hens in the morning, he wondered what killed them.

Ventilation has very properly been made the subject of legislation. Even knowing how essential is air, man is such an obstinate being that often the law has to be invoked to compel him to supply it to those of his fellow-beings who spend their working hours in buildings which he provides. Air is not free. It costs windows and cubic space per person.

The employer who advertently deprives a workman of air is more base than one who robs him of his overcoat.

The Indian fell a victim to the decimating scourge of tuberculosis only after he learned to live in the white man's air-proof dwelling.

Germs can locate and develop only in tissue of low resistance. The blood stream contains white cells which devour these lurking culprits. So long as the lungs are exercising their correct interchange of air and blood, white cells are increased, tissue resistance strengthened and the invading germs are conquered.

All parents and children, as well as others, should set aside a few minutes each day for practicing forced deep breathing. Stretch the arms in front of the body, place palms together, rise on tip toes while breathing in deeply and holding the breath; drop suddenly to the heels with a short blowing expiration through the mouth. Repeat with arms stretched above the head and hands clasped. Alternate until each position has been taken about ten times. This will help to form good breathing habits. This should be practiced out of doors or by an open window.

Water

The second vital demand is for Water. About three-fourths of the body weight is water. Every cell and tissue of the body is bathed in fluid. The chemical union of Hydrogen and Oxygen supplies a large amount, but over and above this, there are required by an adult of ordinary size about eight or ten glasses of water per day to replace that which is excreted. Seldom does any one drink enough water unless he uses it to assist in washing down food which is hurriedly eaten. If one depends upon the promptings of thirst to guide him in the amount of water he drinks he is no more rational than if he depended upon the temperature comfort of a negro janitor to govern the amount of coal which he feeds into the furnace.

Thirst is often mistaken for hunger and when the body sends out a call for water it may be misinterpreted; as was the two year old child who wanted to say her prayers but her language was faulty and her mother, totally unable to understand her pious and laudable desire, administered first punishment, then castor oil, before her comprehension was aroused.

A man afflicted with diabetes may have an inordinate thirst for water because of nature's effort to hold the sugar in solution and also replace the great loss of fluid. Nature is ever trying to balance the scales and make reparation for our wrongs. She needs our co-operation.

One or two glasses of cold or hot water, with a small spoonful of unsweetened lemon juice in it, taken before breakfast, gives the stomach a good lavage and prepares it for its digestive function. Cold water has more tonic effect than hot. It gives a little shock to the secretory glands and brings about a gentle reaction. The lemon juice has a greater importance than that of flavoring; it exerts an influence upon acid secretion. After three weeks of this routine the lemon water should be suspended for one week, then resumed. Omit the first week of every month.

Food

Of all discretionary powers invested in the human there is none so misused as the government of food ingestion. Because food furnishes nutrition to the blood we must eat or starve. If Nature provided only milk, bread and spinach for dietary purposes one would find in these a fair balance of food principles and he would have no temptation to commit gastronomic atrocities in the name of nutrition. Nature, however, has been lavish in the provision of varieties of food material and she leaves to one's own discrimination the selection of quality and quantity. Gastric responsibility becomes personal. By some evil genius it may enter into the heart of a man to desire an article of food which is unwelcome to the digestive economy. He is easily convinced that appetite without digestive co-operation is a blot upon his happiness. Seldom does an adult in full possession of his liberty and faculties select the kind of food that is food for the nourishment of his body *because* he knows it to be of nutritional value. Man eats because he enjoys the taste of food and the more he

eats the more taste he gets. Hence he goes rashly ahead, ignoring cellular demands, or the economic welfare of his body, devouring whatever looks well and tastes well, so long as it lies within the limit of his purse strings, whether it yields flavor, food or poison.

Appetite is not always a safe guide to fuel requirements. If appetite expresses a strong preference for one kind of food to the exclusion of others it will lead to disturbed balance.

Some food is designed for rebuilding of cells, other foods yield heat, energy and fat. There is some waste material in all foods but this also performs a useful part in supplying bulk to excretions. If an insufficient amount of food is supplied, the blood becomes impoverished, the tissues suffer from anemia, the whole body weakens and its resistance is menaced. No one can live to happy old age who is under-nourished. Likewise it is just as impossible to avoid the complications which attend excessive food intake, and the victims of this error far outnumber those of starvation.

A man who had by his own efforts built up a considerable fortune once said, "A man can't afford to eat until he is forty and then by his doctor's orders he may not."

The irony of it lies in the fact that at forty man's food requirement is lessened, his ability to dispose of surplus food is reduced, while his financial increase allures him into those verdant pastures where his longing youth would fain have fed.

Nature has fixed an arbitrary number of years in which the body may grow in size; beyond this limit the bones cease to grow, the organs and tissues no longer grow. If more food is supplied than the organism can use in the construction of new cells, which are to replace those which are constantly cast off, or for the production of force and heat, it must be stored in the body in the form of fat. Only sufficient fat to give an aesthetic plumpness to the figure is desirable. An excess of fat becomes obesity. Obesity is the greatest foe of youth and health.

When a woman acknowledges too much *avoirduois* she usually has in mind her appearance. Her first information is presented by her mirror which can reflect only the outward contour. The fat which is most opposed by its possessor is that deposited in the chin and abdomen, yet this is the least reprehensible. There is more architectural accommodation for it in these places, less resistance in the loose tissues. This is why a wise Nature places

it there. But the real trouble in obesity begins when the internal organs are invaded.

If the mirror had the penetrative power to exhibit this internal fat creeping by tortuous yellow paths into these organs which make up the body motor, it would not be difficult to understand why there comes, sooner or later, an embarrassment from within which far outweighs the mere matter of pounds avoirdupois per height.

Fat also distributes itself into the muscles and diminishes their ability to act. Muscles act by contracting. The power to behave in this way is given to muscles alone, fat cannot contract, and when a muscle has fatty tissue laid down in its substance it reduces the contractile power of that muscle.

The heart consists only of muscle; by its contraction the blood, the stream of life, is pumped and delivered to all parts of the body. Suppose the heart muscle begins to be crowded with fatty tissue. It contracts with less vigor; the current becomes slower; circulation enfeebled, and that beautiful thing we call Youth is taking its departure, for Youth abides no such thing as stagnation. Activity is Youth's slogan.

The lines, "We count not time by figures on a dial, but by heart throbs,"

were written to express a poetic idea, but today it is a scientific fact. The condition of the heart and blood vessels, not the years you have been alive, is the determining factor of age. Cold science, by means of an instrument applied over the large artery of the arm, calculates precisely the amount of pressure exerted by the blood against the resisting vessel wall and registers the figures upon a scale, and there it stands approving or condemning.

High blood pressure is the fore-runner of apoplexy and paralysis. The vessels lose their elasticity, and under the increased force required to push the blood through, the thin wall ruptures and the damage is done.

High living causes high blood pressure and the chief sin of high living is dietetic. In order to reduce liquor drinking in England a law was passed prohibiting "treating." If the sociability were removed from eating there would be less corpulency. Almost all entertainment takes the form of food and even without guests one has to spread a lavish table to keep up appearance with the servants. One overweight couple who valued health above the scorn of servants set about correcting their food habits. The butler, the maid and the cook carried out the new order with a reluctance common to the African

race; they were seen together and heard whispering "Just fixin' to kill themselves, as well as us."

The underweight person is in a safer zone than the overweight. By increasing the starches and sugar and even the quantity of his food, and by sleeping longer hours and taking daily outdoor exercise, he can take on pounds more easily than the other man can lay them off.

Those wise old priests who in the fulfilment of religious convictions, ordained that one day in seven should be observed as a fast day, and that each feast day throughout the year should be preceded by a fast, were possessed of unusual physiological acumen. They knew that righteous living could not all be carried out on the knees. They were keenly aware that life meant eating and working as well as saying our prayers and with rare comprehension they endeavored to adjust the relation between the physical structure and its spiritual tenant.

If every person regardless of church canon or religious belief were to observe a fast day once a week it would improve both his morals and physique. In substituting planked shad for lamb chops and partaking freely of all other tempting dishes one may escape the confessional but the gastric function is by no means

deceived. The busy cells work as hard to dispose of the shad as the chop. One might eat nothing but codfish, and if he liked it well enough, overtax digestive ability. Food errors are mostly quantitative. Man eats to satisfy his taste; so long as his organs of taste remain intact, and he depends upon gustatory instinct, he is going to overeat unless he can contrive to extract an equal amount of taste from a smaller quantity of food. This can be done; it is a simple problem of mathematics, and has been demonstrated by Dr. Fletcher. Since we taste food only so long as it remains in the mouth, where the taste buds are situated, we must chew each mouthful longer to keep it in contact with the organs of taste.

Almost every person not held by poverty to a scant diet, can cut in two the quantity of food he consumes per day and be better for doing so. Hence, dividing the quantity by two and multiplying the maxillary effort by four he arrives at the same goal of taste satisfaction, improves his nutritive faculties and preserves a safe and more aesthetic contour. Both person and purse derive a benefit.

We have laws which relate to public health. These are necessary and good. There is established a protective relationship between society and ourselves. The

law lays a restraining hand upon the man who would send a child of immature years out from home to become a wage earner. He would be sent to jail if he beat or starved his child; but a man may injure his own body, weaken the resistance of his children and make them amenable to disease by providing too liberally for their sustenance without a word of protest or condemnation from society. The results are less acute and the harm of it less manifest.

Capricious appetite is common in the young. By a perverse freak of Nature the young person dislikes most foods which he should eat and craves sweets and highly flavored foods. His selection must be guided by a person wiser than himself, or he will lose control of his engine. Green vegetables should constitute a large part of the diet.

If your mother did not teach you to eat the humble, but worthy cabbage and spinach, you are likely to avoid these wholesome dishes. One should begin early to eat the things he doesn't like and when he is old he will *like* them.

A few years ago the whole world fell to drinking buttermilk because a noted scientist discovered that a small, frugal nation, subsisting principally upon sour milk, developed more centenarians than

any other nation. This proves how easily taste can be cultivated if one believes in the benefit to be derived. However, the relation of buttermilk to health does not consist in adding it to an already filled menu. The lactic acid found in buttermilk is an excellent antiseptic for the intestinal tract, but it has a better chance for action when not combined with other food. It is most effective when taken alone.

If you are really in earnest in desiring to preserve health and keep young inside as well as outside—for the engine is what counts in your machine—appoint yourself one fast day a week and take only buttermilk, on that day. It is a splendid short cut to success.

Exercise

Exercise and rest are important factors in health preservation. Systematic voluntary exercise for the sake of health is rare in any one below the age of forty. A man who walks to his business or a woman who does her house work usually envies the man who rides or the woman who hires a maid; but the current of life flows faster for the one who walks or works. One cannot go amiss in taking all the fresh air he can avail himself of but the exercise problem should be put into the hands of your "efficiency expert" who has studied your "institution" and knows the operation of its parts. Wrong exercise is just as detrimental as correct exercise is beneficial.

Skating, swimming, dancing, walking, are rhythmic movements which develop grace and poise and are desirable exercises. In order to preserve a balance in skating one must develop muscular co-ordination; in swimming, if his stroke fails he may drown; if one dances awkwardly he has no partners; but walking is beset by no perils of equilibrium or neglect and consequently it is too often performed

thoughtlessly and carelessly. Look at your heels and see if they are worn on one side. A "run over" heel indicates a wrong gait and it is wrong because somewhere between the foot and spine a joint is working improperly. It may be the ankle, knee, hip or illiac joint. Callosities on the feet may cause sciatica by the effort of the joints to relieve pressure on the tender spots. Locate and correct the error, for every wrong step is a bad exercise, and by continuing it you damage your delicate machine.

An irritable heart and a sluggish liver require different kinds of exercise; while brain fag may be associated with either condition and completely change the exercise prescription. The mail carrier and the book-keeper may need to exchange occupations without themselves being aware of the fact.

Occupation is a prominent factor in length of life. The business of driving a junk wagon is more conducive to health than that of a bank clerk. Therefore, the bank clerk should apply his brains to the business of living, in order to compete physically with the junk man.

The man who finds a job through the want advertisements of a newspaper and has to take the first thing he can get because he is in need of funds, has a smaller

chance of living to happy active old age than the man who has been reared with the intention of long life in his heart and by reason of such rearing has selected and followed a line of work such as will contribute to his determination.

Work is the most health-giving as well as the most interesting thing in the world. But one must learn to forget the burden and know only the joy of work. Play and work after all are not dissimilar. The only difference is in the end product. If the result of effort is pleasure we call it play. If compensation is added to pleasure we call it work. Work which exercises both mind and body is ideal, but too often tasks prove monotonous and routine, calling for all mental or all physical energy; this makes for imperfect development.

An ambitious coal miner once learned to recite "Horatius at the Bridge" while he swung his pick under ground. He was trying to average his mental and muscular work.

Work which brings no happiness is a grind, but everything depends on one's view point. Packing strawberries into boxes is said to be monotonous; it is at least more colorful than feeding paper into a gray printing press. A grave digger has a contracted vision when he looks

downward but his body is splendidly exercised, and, if he is not deaf, there is music of birds and his soul has a chance to expand with his lungs.

Professional persons who lead studious lives must begin early to learn the value of trained muscular movements. The liver is constantly sluggish in the man of quiet habits and nothing is so opposed to happiness and youth as a torpid liver.

“Hepatic insufficiency” has, by sad misfortune, brought many an one into the divorce court because he visited a lawyer instead of a physician.

But no number of pills or powders is going to transform a man who spends eight hours a day humped over a desk, a like number in excessive eating, complaining and finding fault with his family, and the other eight lying on his back and snoring. The cells of his body have formed bad habits; habits make character; therefore, one’s character depends upon his chemistry and you are the master of your own laboratory.

Your chef may provide the materials but you must make the organs use and change it. If your liver cells are not prodded by exercise they form habits of idleness, which habit is the starting point of most chronic diseases. Bind the arm to the body and give it no exercise and

it soon becomes powerless to work. Give the brain no exercise and it becomes dull.

Correct bending and twisting of the body, accompanied by deep breathing which presses the diaphragm against the liver and gives it gentle massage arouses its activity, and should be a daily practice of every man and woman who appreciates health. Properly swinging a golf club gives fine exercise to the liver and you do not have to belong to a Country Club in order to make the motion. Your back porch serves as a splendid course and mere imagination can supply the club.

The physical and mental forces are intimately related and each reacts upon the other. It is well known that emotion affects physiology, grief arrests digestion, fright upsets the heart. Just so does impaired liver functions and restricted elimination cause evil temper.

A boy became fractious in school and his teacher called in the Principal to compel his obedience. That Principal happened to be a woman and a very sagacious woman. She asked for no humiliating explanation but looking that boy sternly in the face she inquired in language which was quite within his comprehension whether Nature had that morning performed all the functions of

his body. He bashfully replied "no Ma'am". "Well" said she, sympathetically, "that explains why you have defied your teacher and given her trouble. You are not a bad boy but you have poisons circulating in your system which should be cast off. This poison affects your behavior and makes you do wrong. Go right home and tell your mother to follow instructions which I shall send her and when you come back tomorrow you will be a good boy."

Outline of Exercises

A few exercises designed to avert some of the commonest ailments are herewith appended.

The old adage "An ounce of prevention is worth a pound of cure" is a reliable one. Preach it and practice it for your own good and that of the nation.

CONSTIPATION—(a) Before rising from bed stretch the limbs and take in a deep breath. Draw up the knees and give deep massage to abdominal muscles, using a circular motion. Begin low down on right side, work upward, across and downward on left side, following the course of large colon.

(b) Throw bed covering back, clasp hands together and rise to sitting posture with legs straight on bed.

(c) Turn on stomach and get out of bed, hands first. Upon reaching the floor with hands and feet drop on stomach, raise the body until only hands and toes touch the floor; lower the body until abdomen touches the floor. Continue alternate movements for sixty seconds.

LIVER TORPIDITY—(a) Stand on tip toes, strongly stretch both arms upward as high as possible. Take deep breath, hold until you have counted four, drop to the heels, bend forward, and touch finger tips to the floor. Repeat six times.

(b) With hands on hips take in a deep breath, bend the trunk at right angles to the legs and twist the body as far as possible to the right. Assume upright position and suddenly exhale. Repeat, twisting to the left. Alternate six times.

HEADACHE—Overcome rigidity of neck muscles by rotating the head. To do this clasp the hands at back of neck and make some pressure. Throw the head strongly backward against this pressure, then roll toward the left shoulder, forward until chin rests upon the chest and toward the right shoulder and backward completing a circle. Rotate in opposite direction. Alternate six times.

OBESITY—Exercise designed to accelerate circulation and excretion.

(a) Running is excellent. Run across the room and skip back.

(b) Stand beside a strong chair or bench. Place one foot firmly on the chair and spring up with the other foot.

(c) Lie on back and bring legs up to a right angle with the trunk.

(d) Standing on the left foot, flex the right leg on thigh and thigh on trunk; clasp the hands below the knee and bring it up as high as possible. Hop on left foot, counting three; on the fourth count drop the right leg and raise left in the same manner hopping on right. Alternate rythmically many times. These exercises should be carried to point of fatigue.

APPENDICITIS:—Creep on hands and toes with a fairly rapid rythmic movement.

RHEUMATISM:—(a) Stand on left foot, cross right leg over in front of left, resting the toe on a line with the other one; swing the leg outward and describe a circle, bringing the toe to rest in the same spot with the leg crossed behind the left one. Repeat with left leg describing the circle.

(b) With hands on hips drop down on right knee, rise, advance right foot one step and drop to left knee, rise, advance and drop to knee until you have crossed the room.

(c) Clasp hands over the head, inhale deeply, drop clasped hands and exhale. Repeat ten times.

FOOT ARCH DAMAGE:—(a) Walk on toes with feet bare.

(b) Spend part of your sleeping hours lying on the stomach, with insteps resting on the mattress.

The deep breathing exercises previously described should be a part of the daily routine of every person in health and out of health, in all seasons and circumstances of life. It will give joyous life to your years and in so doing add years of joy to your life.

Rest

In the renewal of energy rest is as important a factor as food or exercise. In the resting period the mysterious vital force is recuperated in preparation for future demands. Rest does not supply fuel to the engine, nor feed the boiler, but it acts as a lubricant without which no machine whether it is an egg beater or a railroad locomotive can be operated. A machine in continuous operation needs regular lubrication with the right kind of oil. The body cannot be rested in spasms and then run until friction develops before it is rested again. As a tired horse responds to the lash so will the body under the stimulation of excitement continue to perform work but it suffers in some part and pays for the damage in youth, health and good looks. We do not settle for pleasures which make us lose rest upon a financial basis alone.

Sleep, which is perfect rest, is the greatest restorer of mind and body because it insures complete relaxation of every part. We need one third of our time to be devoted to sleep. If a man

lives fifty years Nature expects him to spend about seventeen of those years asleep in a comfortable bed. If he does not "cheat" and fulfills other obligations of Nature he has left thirty-three years of activity. Any one can see this is not enough to do all there is to be done today. It costs more to live than formerly, hence, we should get more out of living. We want the years of life to increase too. We ought to live one hundred years and have sixty-six years of waking time instead of thirty-three years. We cannot lengthen our days by stealing from the hours of the night without wasting the precious lubricant; therefore we must establish systematic hours for sleep and stick to it as we would to our own opinion.

When you sleep do not lie on the back, and make pressure on the spine. The overworked spine has carried your weight all day, whether you sat down or stood up. The supine position permits the unsupported jaw to drop and pull down the muscles of the mouth and face; this is enough to condemn it, but it is also the position of the man who snores, and nobody loves him.

Avoid propping the head and the shoulders high with pillows unless you happen to be expecting a stroke of apoplexy. Lie on the side, tuck a soft pillow

under the head and neck, push it away from shoulders so that neck only is supported by it. Rest the cheek on the pillow and the chin is held up in a way that does not permit the jaw to drop and breathing to take place through the mouth.

If a wind touches your cheek regard it as a friend bringing rich refreshment. Slight exposure is immunizing to cold.

Vacation from business is a desirable form of rest. Short frequent vacations give better results than long ones. Change of scene and environment is restful. If your work is in a great city, seek the quietude of the country. Relief from confusion and noise brings relaxation. Rest does not imply absolute idleness.

A woman who carries on a large business in a western city goes to her ranch for week ends. She milks a cow and digs potatoes and calls it rest. She proves the fact that changing from one occupation to another brings body relief. A "perfect model thirty-six" weary of displaying ravishing gowns all day, goes home to a little flat, dons a percale apron, and without a sigh cooks her dinner, washes the dishes and experiences a sense of rest. The mental tension is relaxed while the muscular element is being exercised.

Play out of doors, and play much! We take life too seriously. Frivolity and laughter are not only great beautifiers but the heart pumps more forcefully when we laugh. Laugh in the open air and the lungs are expanded and the complexion improved.

Why knit one's brow and make wrinkles playing bridge for recreation when there are woods or golf links near? The feet crave the pressure of the soil of earth. The Aborigines knew not the misery of broken arches of the feet! They depended for locomotion upon their own pedal extremities but the trail was not paved with cement nor their huts with hard wood.

Soul

Man is not merely a chemical fact, "a thing of watery salt, held in cohesion by unresting cells, that work, they know not why." Man is vastly more than so many pounds, and fractions thereof, of twelve elementary substances made up into bone and blood and brains. The heart of man is not simply a cardiac pumping station, nor the brain a set of intellect alone.

Into the creature of bones and flesh there is incarnated a spark of divine life. Were it not so we might well ask "Why should the spirit of mortal be proud?" It is the spirit of man that ennobles and dignifies his chemistry. The whole wonderful body mechanism endowed with life and operated by a miracle is but the vehicle of expression of the spiritual character of man.

The great victory of life is happiness, and true happiness lies in the subjugation of such physical impulses as tend to mislead, and expansion of the spiritual powers. Let love dominate your deeds, for love is the prompting of the spirit which speaks through the heart.

The soul sees and speaks through the body but it must be free from spiritual presbyopia and laryngeal obstruction. There is also a hygiene of the soul for it demands nourishment as well as the body. The desire to love and be loved, the intense interest in human affairs, the wish to serve others and be missed in the world, are but the call of the spirit for nourishment to carry on its life within its dwelling house.

If the soul becomes atrophied the body is useless for there is no longer need for expression. There is nothing so dull as despair. Make companions of zeal and enthusiasm, they prolong both life and youth. Court every happy adventure of life and associate freely with joy.

It is not by following fads, such as going bare-headed, bare-necked or bare-footed and freezing the marrow in one's bones; nor by excluding from the diet all the things that are agreeable to one's taste, and penitently eating those things which one dislikes; nor by romping through a system of exercises which may be totally inappropriate, but it is by a careful study of your own House Beautiful by one who is able to apprehend its particular needs and make an adjustment which correlates all the essentials of body

and soul that long, joyous, vigorous life can be attained.

To be vigorous at one hundred one must be vigilant from the dawn of life and never cease his vigilance until his sun has set.

The Living Temple

Not in the world of light alone,
Where God has built his blazing throne,
Nor yet alone in earth below,
With belted seas that come and go,
And endless isles of sunlit green,
Is all thy Maker's glory seen;
Look in upon thy wondrous frame,—
Eternal wisdom still the same!

The smooth, soft air with pulse-like waves
Flows murmuring thru its hidden caves,
Whose streams of brightening purple rush,
Fired with a new and livelier blush,
While all their burden of decay
The ebbing current steals away,
And red with Nature's flame they start
From the warm fountains of the heart.

No rest that throbbing slave may ask
Forever quivering o'er his task,
While far and wide a crimson jet
Leaps forth to fill the woven net
Which in unnumbered crossing tides
The flood of burning life divides,
Then, kindling each decaying part,
Creeps back to find the throbbing heart.

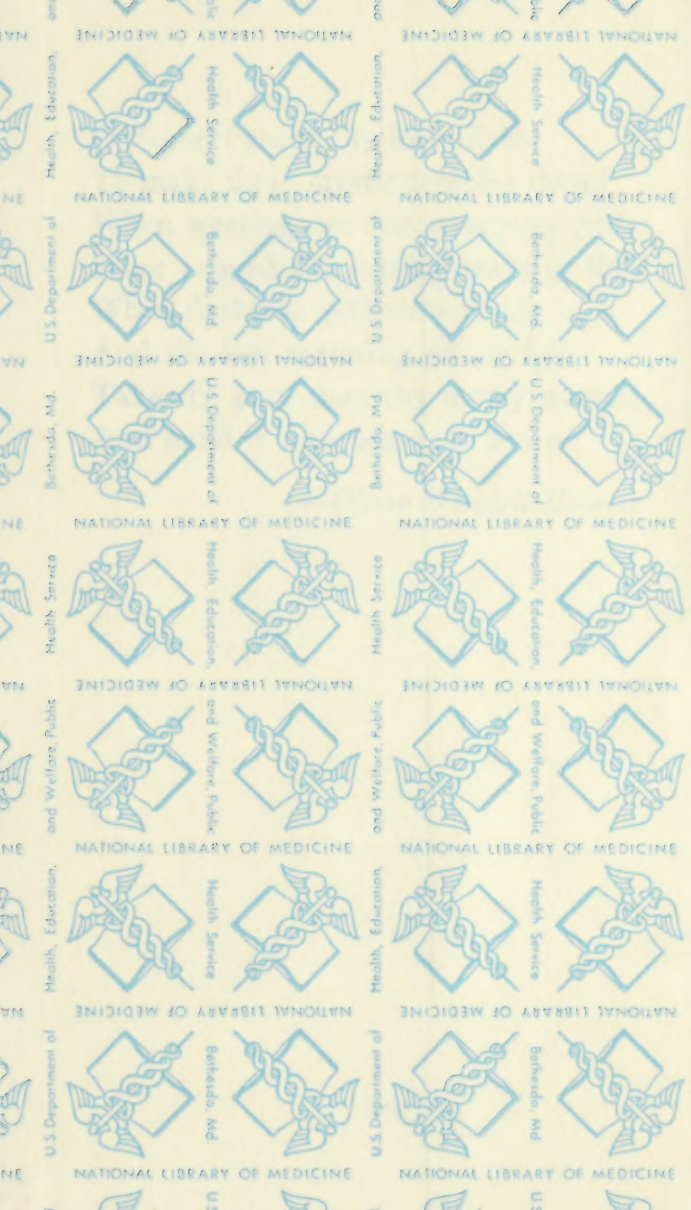
But warmed with that unchanging flame
Behold the outward moving frame,
Its living marbles jointed strong,
With glistening band and silvery thong,
And linked to reason's guiding reins
By myriad rings in trembling chains,
Each graven with the threaded zone
Which claims it as the master's own.

See how yon beam of seeming white
Is braided out of seven-hued light,
Yet in those lucid globes no ray
By any chance shall break astray.
Hark how the rolling surge of sound,
Arches and spirals circling round,
Wakes the hushed spirit in thine ear
With music it is heaven to hear.

Then mark the cloven sphere that holds
All thought in its mysterious folds,
That feels sensation's faintest thrill,
And flashes forth the sovereign will;
Think on the stormy world that dwells
Locked in its dim and clustering cells!
The lightening gleams of power it sheds
Along its hollow glassy threads.

O Father! grant thy love divine
To make these mystic temples thine!
When wasting age and wearying strife
Have sapped the leaning walls of life,
When darkness gathers over all,
And the last tottering pillars fall,
Take the poor dust thy mercy warms,
And mold it into heavenly forms!

—*Oliver Wendell Holmes*





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